AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for the enhanced production of pantothenate, comprising:

transforming a *Bacillus subtilis* cell with a recombinant vector as set forth in SEQ ID NO:28;

selecting a recombinant cell having antibiotic resistance, thereby producing a recombinant microorganism; and

culturing said recombinant microorganism under suitable ~~culturing a microorganism having a deregulated methylenetetrahydrofolate (MTF) biosynthetic pathway, under~~ conditions such that pantothenate production is enhanced, as compared to the production of pantothenate by an unmodified microorganism.

2.-11. (Canceled)

12. (Currently Amended) The process of claim 1 ~~claim 11~~, wherein the microorganism further comprises a recombinant vector as set forth in SEQ ID NO:24 ~~has a deregulated *glyA* gene~~.

13. (Currently Amended) The process of claim 1 ~~claim 11~~, wherein the microorganism further comprises a recombinant vector as set forth in SEQ ID NO:25 ~~has a deregulated *serA* gene~~.

14. (Currently Amended) The process of claim 1 ~~claim 11~~, wherein the microorganism further comprises a recombinant vector as set forth in SEQ ID NO:24 and a recombinant vector as set forth in SEQ ID NO:25 ~~has a deregulated *glyA* gene and a deregulated *serA* gene~~.

15. (Canceled)

16. (Canceled)

17. (Currently Amended) The process of claim 1 ~~claim 16~~, wherein the microorganism is cultured under conditions such that at least 50 g/L pantothenate is produced after 36 hours of culturing the microorganism.

18. (Previously Presented) The process of claim 17, comprising culturing the microorganism under conditions such that at least 60 g/L pantothenate is produced after 36 hours of culturing the microorganism.

19. (Previously Presented) The process of claim 17, comprising culturing the microorganism under conditions such that at least 70 g/L pantothenate is produced after 36 hours of culturing the microorganism.

20. (Currently Amended) The process of claim 1 ~~claim 16~~, comprising culturing the microorganism under conditions such that at least 60 g/L pantothenate is produced after 48 hours of culturing the microorganism.

21. (Previously Presented) The process of claim 20, comprising culturing the microorganism under conditions such that at least 70 g/L pantothenate is produced after 48 hours of culturing the microorganism.

22. (Previously Presented) The process of claim 20, comprising culturing the microorganism under conditions such that at least 80 g/L pantothenate is produced after 48 hours of culturing the microorganism.

23.-27. (Canceled)

28. (Currently Amended) The process of claim 1 ~~any one of claims 1, 2, and 16~~, wherein said microorganism is cultured under conditions of excess serine.

29. (Canceled)

30. (Currently Amended) The process of claim 1 ~~any one of claims 1, 2~~, wherein said microorganism ~~has the pantothenate biosynthetic pathway deregulated such that pantothenate production~~ is independent of β-alanine feed.

31.-51. (Canceled)

52. (New) The process of claim 1, wherein the microorganism further comprises a recombinant vector as set forth in SEQ ID NO:29.

53. (New) The process of claim 1, wherein the microorganism further comprises a recombinant vector as set forth in SEQ ID NO:24 and a recombinant vector as set forth in SEQ ID NO:29.

54. (New). The process of claim 28, wherein said microorganism is cultured in the presence of greater than 2.5 g/L of serine.

55. (New). The process of claim 28, wherein said microorganism is cultured in the presence of greater than 5 g/L of serine.

56. (New). The process of claim 28, wherein said microorganism is cultured in the presence of greater than 10 g/L of serine.